FISHER COLLEGE OF BUSINESS – HONORS THESIS IN FINANCE

Variables Impacting Student Loan Knowledge

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INTRODUCTION

Student loan debt has eclipsed auto and credit card debt; it is now the second largest category of household debt, only lagging behind mortgage debt. In August 2015, student loan debt in the U.S. ballooned to over $1.3 trillion. While a college degree remains valuable, tuition and fees continue to escalate. With default rates hovering around 14%, student loan debt has become a serious issue for U.S. households.

AIM

The goal of this research was to determine whether students view their student loans as investments and if there are variables that impact students' knowledge about their loan(s).

METHODS

To answer the questions this research posed, a Qualtrics survey was created and distributed to select Ohio State classrooms. In total, 441 out of an approximately 2,000 OSU students participated. It should be noted, that survey participation was predominately underclassman (~75%) because of the demographics of the classrooms where the survey was distributed.

Students answered questions about three metrics that are used in the study as proxies to gauge student loan knowledge. The same metrics are used as dependent variables in the statistical tests. They are:

1. Debt burden
2. Interest rate
3. Expected starting salary

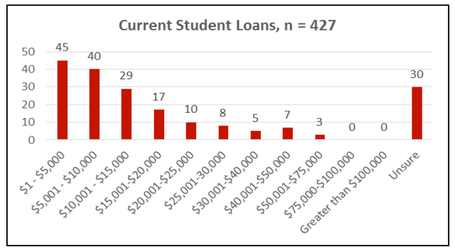
Moreover, students answered questions about their lifestyle and life experiences, which asked questions about five additional variables. These variables were then used as the independent or explanatory variables during the statistical tests. They are:

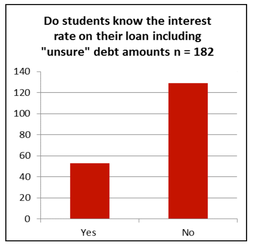
1. Current employment while at school
2. Dependent on loans for greater than 50% of their expenses
3. Completed a personal finance course in high school
4. Completed a personal finance course in college
5. Follows a weekly or monthly budget

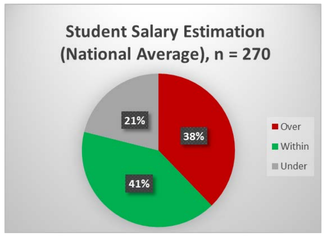
Two different statistical tests, multivariate regressions and two-proportion Z-tests, were conducted to determine if the independent variables could be associate with greater knowledge about those key metrics. It was hypothesized that the presence of each independent variable will make a student more sophisticated about their student loan(s).

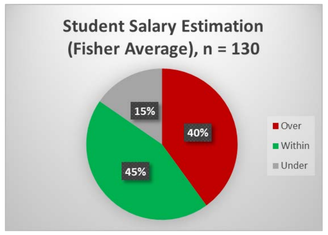
RESULTS

Results for dependent variables

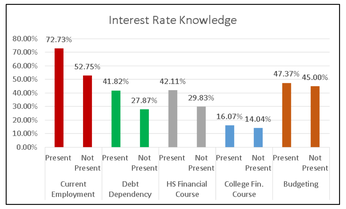




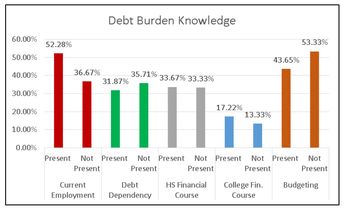




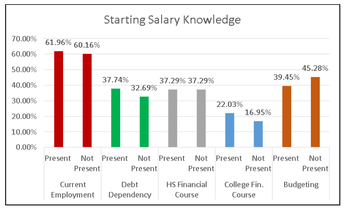
Results for statistical tests



	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.210	0.086	2.437	0.016
Employment	0.150	0.075	2.009	0.046
Debt Dependency	0.094	0.077	1.222	0.223
HS Financial Course	-0.048	0.074	-0.650	0.516
College Fin. Course	-0.049	0.097	-0.503	0.616
Budgeting	0.002	0.077	0.023	0.982



	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.910	0.037	24.269	0.000
Employment	0.083	0.039	2.142	0.033
Debt Dependency	-0.038	0.040	-0.932	0.352
HS Financial Course	0.002	0.039	0.043	0.966
College Fin. Course	0.011	0.050	0.216	0.829
Budgeting	-0.041	0.036	-1.119	0.265



	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.200	0.079	2.512	0.013
Employment	0.031	0.068	0.449	0.654
Debt Dependency	0.019	0.072	0.270	0.787
HS Financial Course	0.060	0.071	0.844	0.400
College Fin. Course	0.151	0.091	1.673	0.096
Budgeting	0.029	0.070	0.407	0.684

ANALYSIS, FINDINGS, & CONCLUSION

The multi-colored bar charts included in "results for statistical test" section, display the proportions of students who knew the dependent variable when the independent variable was present versus students who knew the dependent variable when the independent variable was not present. The charts are broken down into the three dependent variables. In addition, you will find the results of the multivariate regressions next to the bar charts. Those results are explained below.

Multivariate Regressions

To test whether the independent variable impacts student's knowledge about their loans a multivariate regression was preformed. The advantage of this regression is that is takes into account the other variables when finding which have a significant effect. Since this is a one-tailed test if the p-value is less than .1 than the variable is shown to be significant. The three instances where this happened are listed below with the independent variable listed first followed by the dependent variable.

1. Current Employment – Debt Burden (.028)
2. Current Employment – Interest Rate (.046)
3. College Financial Course – Starting Salary (.095)

Two-Proportion Z-Tests

Since two-proportion Z-tests do not account for the other variables when testing each one for its significance, the results should be analyzed with caution. There were four times when the p-value was less than .1 deeming the independent variable significant. Two of these instances (current employment – debt burden & current employment – interest rate) overlapped with the previous results, providing additional evidence that it can be concluded current employment has a significant impact on student loan knowledge.

1. Current Employment – Interest Rate
2. HS Financial Course – Interest Rate
3. Debt Dependency – Interest Rate
4. Current Employment – Debt Burden

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